

AMENDMENTS TO THE CLAIMS:

The listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF THE CLAIMS

1.-25. (Canceled)

26. (New) A system for remotely supporting a family of products even when the products are deployed in the field, the system comprising:

at least one respective unit (110) of a first product of the family of products;

an interchangeable device model (122, 123) for the first product selected from a family of device models wherein each member of the family of device models includes at least identifications of classes of information that can be communicated to and/or from the each of the products of the family of products and mappings indicating how the classes of information can be communicated to and/or from the first product;

at least one respective device model agent (120) that is operative to read the interchangeable device model and access information in the at least one respective unit and to provide information to the at least one respective unit according to the interchangeable device model and to communicate with at least one other element of the system regarding the at least one unit over at least one communications link according to terms, parameters, structures or protocols that are common to products of the family of products, regarding at least one of unit configuration parameters, unit status information, available upgrade information, selected upgrade information, selected downgrade information, available update information, requested update information, an error message, and service request information ; and

a services host server (310) that is operative to exchange information with the at least one respective device model agent over the at least one communications link, the exchanged information including at least one of: the unit configuration parameters, the unit status information, the available upgrade information, the selected the upgrade information, the selected downgrade information, the available update information, the requested update information, the error message, and the service request information.

27. (New) The system of claim 26 further comprising:
at least one respective second unit (110) of a second product of the family of products;
a second interchangeable device model (122) for the second product selected from the family of device models wherein the second interchangeable device model includes mappings indicating how the classes of information can be communicated to and/or from the second product; and
at least one respective copy of the device model agent (120) that is operative to read the second interchangeable device model and access information in the at least one second respective unit of the second product and to provide information to the at least one respective unit of a second product according to the second interchangeable device model and to communicate with the services host regarding the at least one unit over at least one communications link according to the terms, parameters, structures or protocols that are common to products of the family of products, regarding at least one of second unit configuration parameters, second unit status information, available second unit upgrade information, selected second unit upgrade information, selected second unit downgrade information, available second unit update information, requested second unit update information, an error message regarding the second unit, and service request information regarding the second unit.

28. (New) The system of claim 26 further comprising:
at least one services provider (300) that is operative to exchange information with the services host server over at least one communications link and to provide at least one of: updated software, software upgrades, billing services, maintenance services and repair services for the at least unit according to at least one of: the unit status information, the selected upgrade information, the requested update information, the error message and the service request information received from the at least one unit.

29. (New) The system of claim 26 wherein the at least one respective device model agent is at least one of: implemented as a process included in the at least one respective unit and implemented within a physical add-on module (115) that is connected to the respective at least one unit.

30. (New) The system of claim 26 further comprising:
an application server (200, 310, 320) that is operative to receive application software modules from at least one services provider and make the software application modules available for transmission to and installation in the at least one respective device model agent for performing new services in conjunction with the at least one respective unit.

31. (New) The system of claim 5 wherein at least one of the at least one respective device model agent is at least one of: implemented as a device proxy (210) and implemented in a device proxy within in the applications server.

32. (New) The system of claim 5 wherein at least on of: the respective at least one unit, the services host server and the application server further comprise:

an application programming interface (130, 230, 330) that is operative to determine which means of communications are available to the application programming interface, to select one or more communication means from the available communications means for communicating with at least one other system element, and to communicate with the at least one other system element according to one or more protocol that is appropriate to the one or more selected communications means.

33. (New) The system of claim 7 wherein the application programming interface supports communication via at least HTTP, HTTPS, JMS, email, 10BaseT, 100BaseT, 10Base2, Modem, IEEE 802.11X, and Bluetooth, protocols.

34. (New) The system of claim 26 wherein the device model agent is further operative to at least one of: add a new service received from an applications server to the device model agent, start a service running and stop a service.

35. (New) The system of claim 26 wherein the at least one respective unit comprises:

an image processing device.

37. (New) A system for remotely supporting a family of document processing products even when the document processing products are deployed in the field, the system comprising:

at least one respective unit (110) of a first document processing product of the family of products;

an interchangeable device model (122,123) for the first document processing product selected from a family of device models wherein each member of the family of device models includes at least identifications of classes of information that can be communicated to and/or from each of the document processing products of the family of document processor products and mappings indicating how the classes of information can be communicated to and/or from the first document processing product;

at least one respective device model agent (120) that is operative to read the interchangeable device model and access information in the at least one respective unit and to provide information to the at least one respective unit according to the interchangeable device model and to communicate with at least one other element of the system regarding the at least one unit over at least one communications link according to terms, parameters, structures or protocols that are common to products of the family of document processing products, regarding at least one of: unit billing meter configuration parameters, billing meter readings, unit document processor consumables supply information, available document processing functions that can be added to the unit, selected document processing functions to be added to the unit, selected document processing functions to be deleted from the capabilities of the unit; and

a services host server (310) that is operative to exchange information with the at least one respective device model agent over the at least one communications link, the exchanged information including at least one of: unit billing meter configuration parameters, billing meter readings, unit document processor consumables supply information, available document processor functions that can be added to the unit, selected document processor functions to be added to the unit, selected document processor functions to be deleted from the capabilities of the unit.

38. (New) The system of claim 37 further comprising:

at least one respective second unit (110) of a second document processing product of the family of document processing products;

a second interchangeable device model (122) for the second product selected from the family of device models wherein the second interchangeable device model includes mappings indicating how the classes of information can be communicated to and/or from the second product; and

at least one respective copy of the device model agent (120) that is operative to read the second interchangeable device model and access information in the at least one second respective unit of the second document processing product and to provide information to the at least one respective unit of a second document processing product according to the second interchangeable device model and to communicate with the services host regarding the at least one unit over at least one communications link according to the terms, parameters, structures or protocols that are common to products of the family of products, regarding at least one of second unit: billing meter configuration parameters, billing meter readings, second unit document processor consumables supply information, available document processor functions that can be added to the second unit, selected document processor functions to be added to the second unit, selected document processor functions to be deleted from the capabilities of the second unit.

39. (New) The system of claim 37 further comprising:

at least one services provider (300) that is operative to exchange information with the services host server over at least one communications link and to provide at least one of: updated document processor software, document processor software upgrades, document processor billing services, document processor maintenance services and document processor repair services for the at least one unit according to at least one of: the unit document processor consumables status information, and the selected document processing functions to be added to the unit.

40. (New) The system of claim 37 wherein the at least one respective device model agent is at least one of: implemented as a process included in the at least one respective unit and implemented within a physical add-on module (115) that is connected to the respective at least one unit.

41. (New) The system of claim 37 further comprising:

an application server (200, 310, 320) that is operative to receive application software modules from at least one services provider and make the software application modules available for transmission to and installation in the at least one respective device model agent for performing new document processor services in conjunction with the at least one respective unit.

42. (New) The system of claim 41 wherein at least one of the at least one respective device model agent is at least one of: implemented as a device proxy (210) and implemented in a device proxy within in the applications server.

43. (New) The system of claim 41 wherein at least on of: the respective at least one unit, the services host server and the application server further comprise:

an application programming interface (130, 230, 330) that is operative to determine which means of communications are available to the application programming interface, to select one or more communication means from the available communications means for communicating with at least one other system element, and to communicate with the at least one other system element according to one or more protocol that is appropriate to the one or more selected communications means.

44. (New) The system of claim 43 wherein the application programming interface supports communication via at least HTTP, HTTPS, JMS, email, 10BaseT, 100BaseT, 10Base2, Modem, IEEE 802.11X, and Bluetooth, protocols.

45. (New) The system of claim 37 wherein the device model agent is further operative to at least one of: add a new service received from an applications server to the device model agent, start a service running and stop a service.